

**USEPA Review of the Draft Construction Summary Report, Parcel C Phase III,  
Characterization Study Performed on Storm Drain and Sanitary Sewer Lines Located  
within the 10-foot Buffer Zone of Buildings 204, 205, 207, and 208, Hunters Point Naval  
Shipyard, San Francisco, California, dated March 2017  
Comments dated 5/23/2017**

**GENERAL COMMENTS**

1. Section 3.2 (Sanitary Sewer and Storm Drain Characterization and Survey Activities) lists the nine reaches that were characterized; however, the listed reaches do not specify whether they are sanitary sewer or storm drain lines. For example, Reaches 1 and 2 are listed as “Ten feet west of Building 208 to MH1084” and “Ten feet west of Building 208 to MH1085”, respectively, yet Figure 3-1 (Characterization Study Details) shows Reach 1 is a sanitary sewer line and Reach 2 is a storm drain line. Please revise the Draft Construction Summary Report, Parcel C Phase III, Characterization Study Performed on Storm Drain and Sanitary Sewer Lines Located within the 10-foot Buffer Zone of Buildings 204, 205, 207, and 208, Hunters Point Naval Shipyard, San Francisco, California, dated March 2017 (CSR) to clarify which reaches are associated with sanitary sewers and which reaches are associated with the storm drain lines.
2. Based on Figure 3-1 (Characterization Study Details), several portions of Reaches 1, 2, 6, and 7 were unable to be videoed or surveyed for gamma radiation, yet the CSR does not specifically discuss why the video/gamma surveys could not be conducted in Reaches 1, 2, or 6. As a result, it is unclear if the portions of Reaches 1, 2, 6, and 7 that could not be video/gamma surveyed represent data gaps and require excavation. This is of particular concern at Reach 7 where the 30 foot portion that was scanned immediately “downstream” of the portion that was unable to be video/gamma surveyed yielded gamma scan values of 284,000 counts per minute (CPM) and 288,000 CPM, as noted in Section 3.2.2 (Storm Drain and Sanitary Sewer Line Gamma Scanning). Please revise the CSR to specifically discuss the portions of the sanitary sewer and storm drain lines that could not be video/gamma surveyed in Reaches 1, 2, and 6 and recommend these reaches for excavation
3. Section 3.2.2 (Storm Drain and Sanitary Sewer Line Gamma Scanning) does not adequately describe how all pipe segments, including those that had sediment accumulation that blocked progression of the video camera, were scanned for gamma activity. For example, Section 3.2.2 states that gamma surveying was accomplished by mounting a gamma detector at the rear of the remote controlled camera unit that was transported along each pipe reach. However, as noted in Section 3.2.1, some segments of pipe were inaccessible to the camera due to sediment accumulation/blockages. Therefore it is unclear how the segments of pipes with blockages were scanned for gamma activity. Based on Figure 3-1 (Characterization Study Details), approximately one-half of Reach 2, one-third of Reach 6, and three-quarters of Reach 7 were not accessible to the video equipment. Neither Section 3.2.1 nor Section 3.2.2 describes how the underground portions of Reaches 1, 6, and 7 that contained sediment blockages were surveyed for gamma activity. Additionally, if gamma scans for these blocked portions of pipe were conducted from above ground, this would result in a completely different counting geometry based on the position of the detector relative to the material being scanned and

background configuration. This would affect the results of the surveys. Please revise the CSR to describe how buried piping that was not accessible to interior viewing and gamma surveying was scanned for gamma activity.

4. Sections 3.2.5 (Sediment Samples within the Storm Drain and Sanitary Sewer Line Manholes and Piping) and 4.0 (Conclusions and Recommendations) states, “Concentrations of Cs-137 [cesium-137] and Sr-90 [strontium-90] in sediment samples were, most likely, within a range that could be expected from worldwide fallout from nuclear weapons testing, but further examination may be necessary;” however, information to substantiate this conclusion are not provided and/or referenced. Similarly, recommendations to examine this issue further are not provided. Please revise the CSR to provide information to substantiate that the concentrations of Cs-137 and Sr-90 in sediment samples were, most likely, within a range that could be expected from worldwide fallout from nuclear weapons testing. In addition, please revise the CSR to provide detailed recommendations for evaluating these concentrations of Cs-137 and Sr-90 in sediment samples.
5. Insufficient information is provided in Section 4.0 (Conclusions and Recommendations) regarding the recommended activities that will be taken. For example, Section 4.0 recommends hydrojetting the storm drain and sanitary sewer system lines to remove sediment; however, several Reaches include compromised lines. As such, it is unclear how these Reaches will be cleaned by hydrojetting; it appears that excavating these lines will be required in order to obtain free release. Please revise Section 4.0 to provide additional details regarding the recommended activities that will be taken to obtain free release, including recommendations for sections of the line that could not be surveyed.
6. The CSR does not discuss how radiological devices, which may be encountered during the recommended hydrojetting, will be identified in the sediment removed from the sanitary sewer and storm drain lines and subsequently handled. The radiological program at Hunters Point Shipyard has specific protocols for handling, storing, and disposing of radiological devices. Please revise the CSR to clarify how radiological devices will be identified in the sediment removed from the sanitary sewer and storm drain lines and subsequently handled.
7. The CRS does not discuss the precautions that will be put in place during hydrojetting to prevent sediment from entering San Francisco Bay. This is of particular concern because the portion of Reach 7 that is recommended for hydrojetting runs from the Outfall at San Francisco Bay to a blocked line. Please revise the CSR to discuss the precautions that will be put in place during hydrojetting to prevent sediment from entering San Francisco Bay.

## SPECIFIC COMMENTS

1. **Section 3.2.4, Soil Core Gamma Scanning and Sampling, Page 3-7:** Based on Section 3.2.4, the soil cores were advanced to one foot below the bottom of the adjacent storm drain pipe or component; however, it is unclear how these adjacent soil cores would be representative of a release from a storm drain pipe or component given that a release would likely migrate vertically due to gravity rather than horizontally/outward toward the

borings. Please revise the CSR to discuss how the adjacent soil cores are representative of a release from a storm drain pipe or component.

2. **Table 3-2, Soil Boring Sample Locations and Gamma Measurements, Page 1 of 2:** While Page 2 of 2 of Table 3-2 provides a legend for the color-coding scheme, it is unclear if the color-coding applies to Page 1 of 2 of Table 3-2. For example, the blue color indicates that “Proposed sample interval to be sent to laboratory for analysis; 6 inches below estimated depth of pipe. If unavailable, the deepest available interval will be selected” yet samples included on Page 1 of 2 of Table 3-2 were already submitted for laboratory analysis. Please ensure the color-coding on Page 1 of 2 of Table 3-2 is appropriate.
3. **Table 3-2, Soil Boring Sample Locations and Gamma Measurements, Page 1 of 2:** It is unclear how a sample was collected at soil boring SB-07 (6.5 – 7.0 feet) and sent to the laboratory for analysis given that Table 3-2 notes it as “Rock.” Please revise the CSR to clarify how SB-07 (6.5 – 7.0 feet) was sampled and sent to the laboratory for analysis.
4. **Figure 3-3, Reach 2 Characterization Study Details, Sheet 1 of 2:** It is unclear why the blue rectangle for SB01 is located above the pipe given that the blue rectangle is intended to denote “6-inch interval below the estimated pipe depth.” Please revise Figure 3-3 to resolve this discrepancy or clarify why the blue rectangle for SB01 is located above the pipe.
5. **Appendix A, Project Photographs:** The caption of Photograph 8 (Gamma detector mounted on pipe crawler) does not appear to describe the contents of this photograph. Photograph 8 shows the bottom of a manhole as the pipe crawler is entering and/or exiting the pipe. It is unclear if a gamma detector is attached to the pipe crawler. Please revise the label on Photograph 8 accordingly.